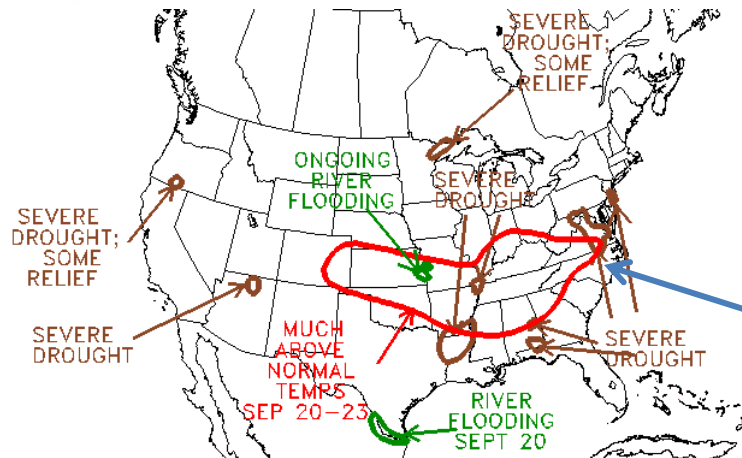
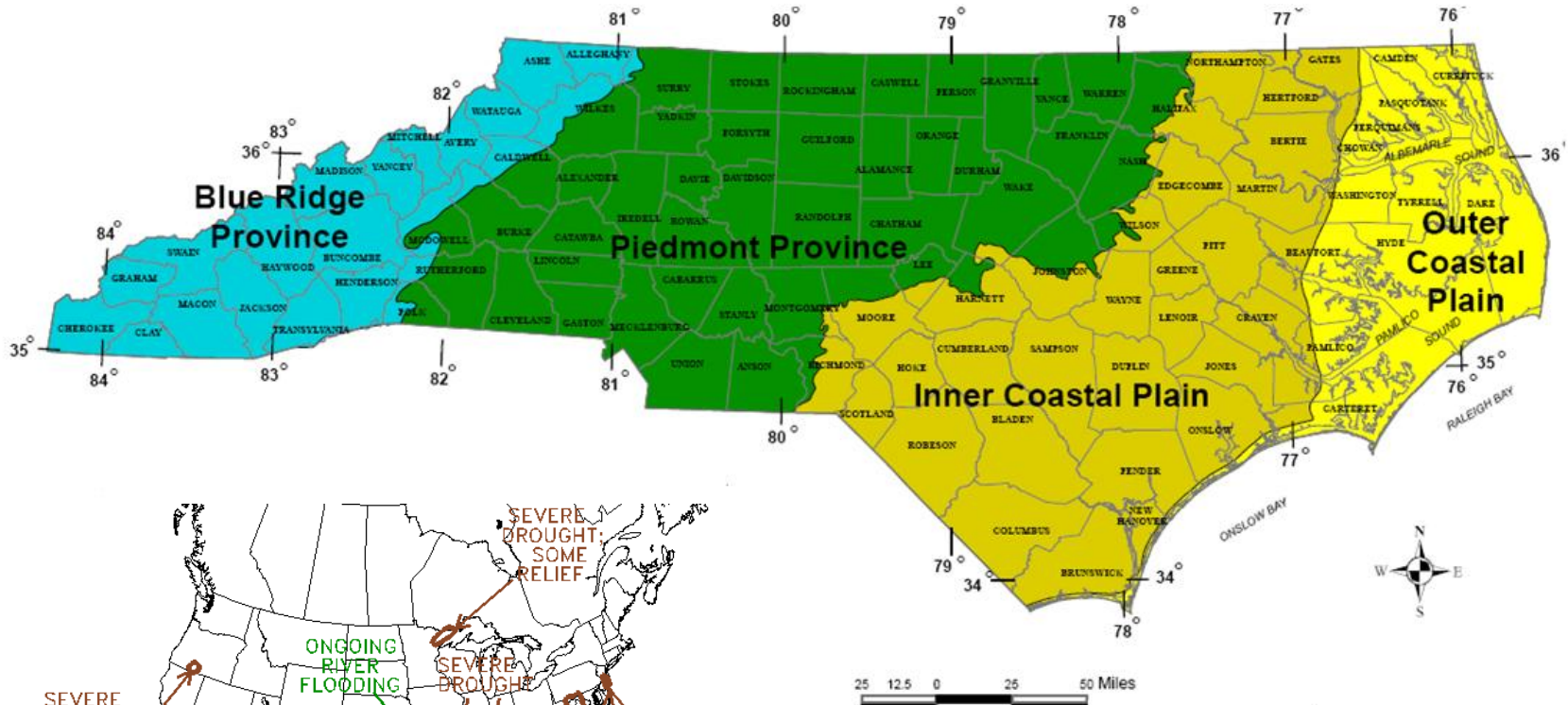




Fire Danger Assessment & Fall Fire Season Discussion

for the period: September 20th – 30th, 2010



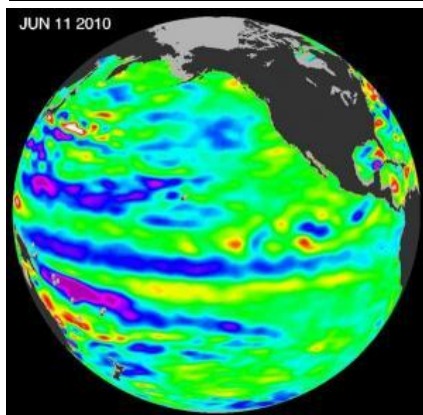
NWS

NWS Hazard Assessment Issued: 09/17/10
Valid: 09/20 – 10/1, 2010

NC is experiencing critical fire weather and fuel conditions. NC is extremely dry as we proceed into the Fall Fire Season.

This slide was posted back in July's Fire Danger Assessment "La Nina is coming back" ...

Well it is back with vengeance



Sea temperatures in the Pacific have been cooling (blue) for some time (since January 2010) . **Anticipate a return of La Nina conditions for this fall fire season.**

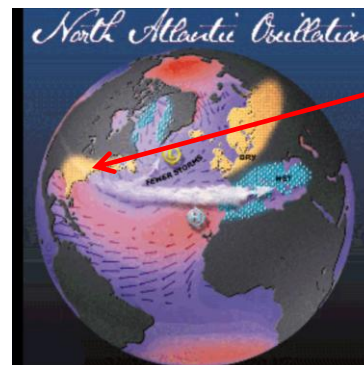
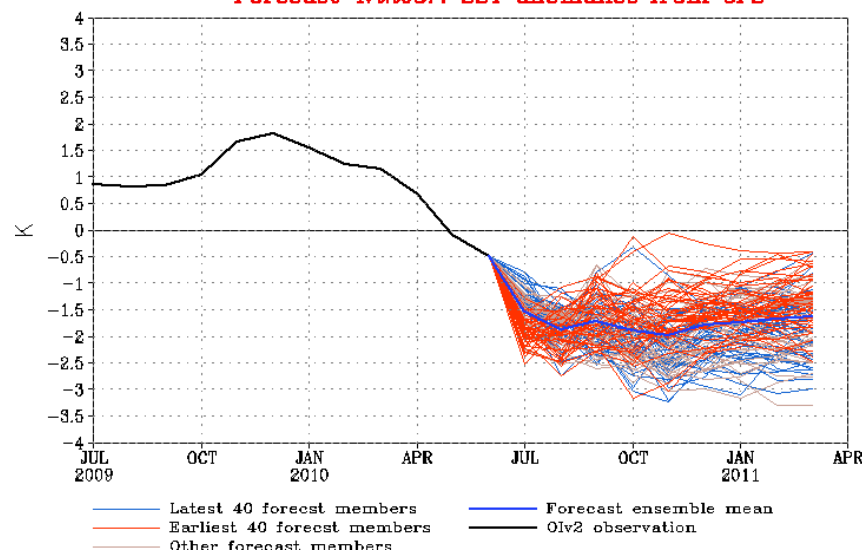
The Fall of 2001, was very active. Aerial Resources were a major contributor in keeping losses and risk to the public and firefighters at a minimum. With depleted aerial capability, this can cost the state in more ways than one. The modeled ensemble mean places us well below the criteria of .5° C for a La Nina Fall fire season.



NWS/NCEP

Last update: Wed Jul 7 2010
Initial conditions: 6Jun2010-5Jul2010

Forecast Nino3.4 SST anomalies from CFS



Should the NAO synchronize with ENSO (La Nina), the Fall of 2010 may be certainly one to remember as NAO alone can impact the dryness of eastern forest fuels.

Points to be considered for this assessment & Fall Fire Season

- The next potential rain event will be possibly this Sunday, September 26th. An upper level trough is passing by but it needs to swing more southward to give us a better chance of meaningful rain.
- There are no wind events seen except along the coastal counties with seas breeze opportunities will prevail. With a frontal pass occurring this weekend, accelerated winds (southwest) can be anticipated especially along the coast as they combine with sea-breeze vectors as well as in the mountains due to topographic constricting.
- We will experience another superb drying week.
- Because of the severity of fuel conditions and anticipated continued drying, we should initiate proactive preparation activities before leaf fall and the Fall Fire Season. Here are some thoughts for implementation:
 1. Each DFR unit needs to examine what pre-emptive measures can be initiated!!!!
 1. Fire Prevention can we start advising the public on what our expectations for the Fall Fire Season? (FE follow-up)
 2. FE managers (CO, District & Region)
 1. initiate your orders TODAY to the RAWS Depot to perform 2010 Annual Rehab on all Fire Intel Stations
 2. Fire Danger Assessments have now officially started again. Models will be reviewed for dangerous weather events
 3. Rehab Fire Raws
 4. Ready EBAMS & Javelins
 5. Ready IR Cameras
 6. Ready Actions for Addressing Potential Smoke Issues FBANS, Regional, District & CO operations
 7. Contact all Strategic Partners as to potential fire season severity
 8. Evaluate fuel conditions to consider initiating curing of NFDRS Fire Danger Stations earlier than normal to reflect the severity of burning conditions
 3. Forest Protection Section:
 1. With the risk of seasonal fire personnel not being available timely due to budgets coupled with the strong potential for extended mop-up needs being handled by a depleted DFR fire suppression work force, other DENR Divisions may need to be tapped for assistance. However, this viable option would require immediate fire suppression training 130 & 190 which then these DENR employees would be able to work under DFR supervision. This training could be centrally conducted at the Archdale Building.
 2. With the devastating reduction in personnel within the aviation wing, what can be initiated to maintain 100% operating capacity?

2010 Fall Fire Season Potential Discussion:

Above average temperatures and below average humidity will continue across North Carolina during the balance of September and the long term outlook for the autumn is for conditions to be both “warmer and drier than average”. Below average temperatures will occur mainly in the wake of frontal passages and are expected to be short-lived events. Fall frontal passages typically produce two to three days of RH minimums in the 20-30% range and these types of situations will become more common as we move into October. Winds will factor in from time to time, increasing the potential for large fires as the drier than average pattern persists. Fire potential is expected to increase as we transition into the fall.

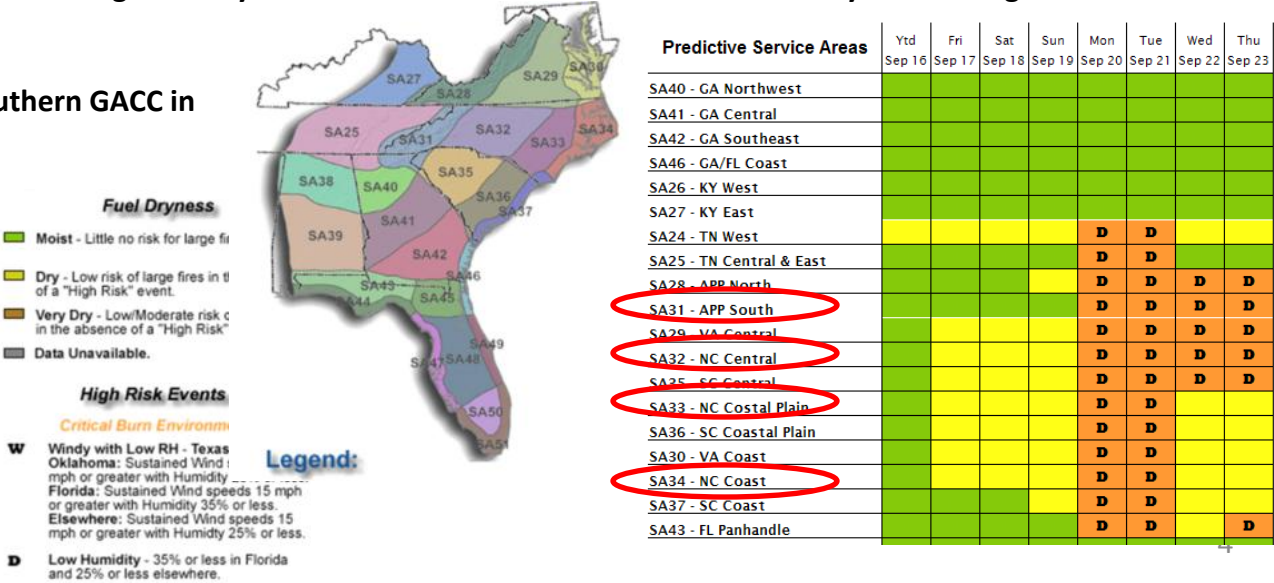
Below average rainfall is expected during the fall as a strong La Nina pattern influences the weather from the Pacific across much of the United States. Rainfall resulting from tropical activity will provide the exception to this scenario.

Soil and crop moisture values remain below average especially in the eastern Carolinas, and southeastern Virginia. If a fire occurs in these areas, these factors will make it more resistant to control and ground fires likely. Since August 24th the Green Swamp in D-8 water table has dropped 2 ½ feet, the Root Mat is at ignitable levels and the muck soil at 312% is only 12% from the critical WATCHOUT THRESHOLD of 300%.

Lack of Winds, sporadic rain, and vegetation that is still green (has its leaves) and a lack of significant triggers for Large Fire Growth continue to keep fire potential in check. However that will change as vegetation transitions to fall as well as the climate pattern for wind events. A long duration rain event is needed to significantly increase the sub-surface water levels in many areas along the East Coast from Virginia southward to central Florida.

* NCDFR FE sincerely appreciates the Southern GACC in providing, & reviewing this Discussion.

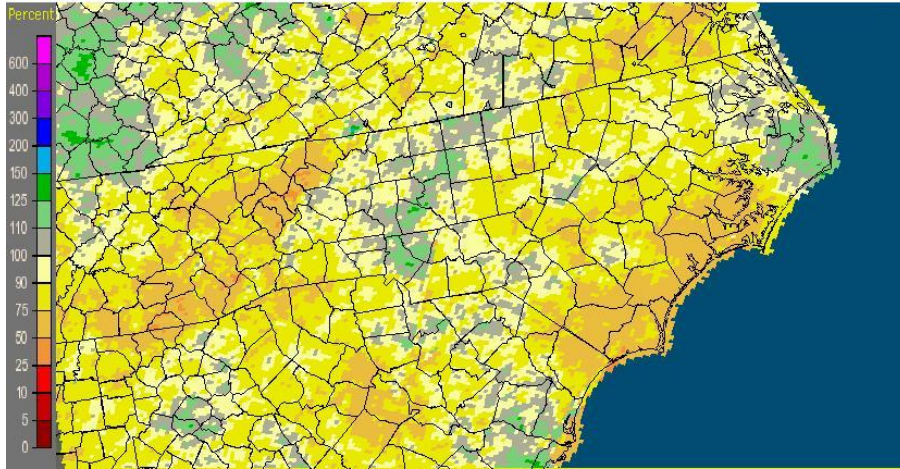
All NC’s Predictive Service Areas are expected to elevate in their Fire Potential for the 2010 Fall fire season. They are all currently dry.



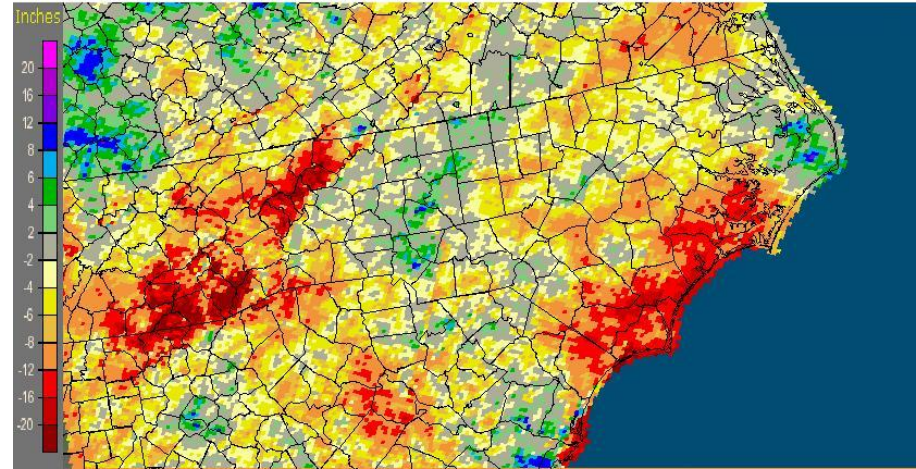
What has led to this critical Fall Fire Season Prediction?

Rainfall was poor over the summer months. The decline in the frequency & duration of recent rain events continues and has effected most of NC.

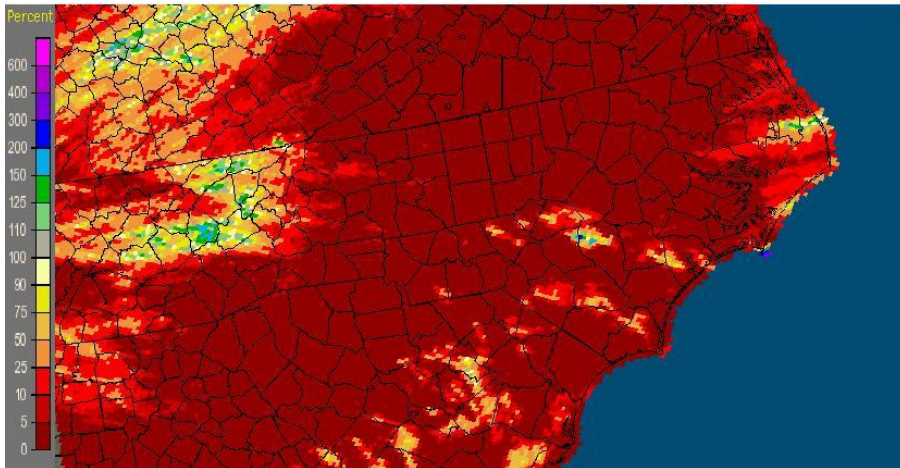
North Carolina: Current Year to Date Percent of Normal Precipitation
Valid at 9/19/2010 1200 UTC- Created 9/19/10 23:55 UTC



North Carolina: Current Year to Date Departure from Normal Precipitation
Valid at 9/19/2010 1200 UTC- Created 9/19/10 23:52 UTC

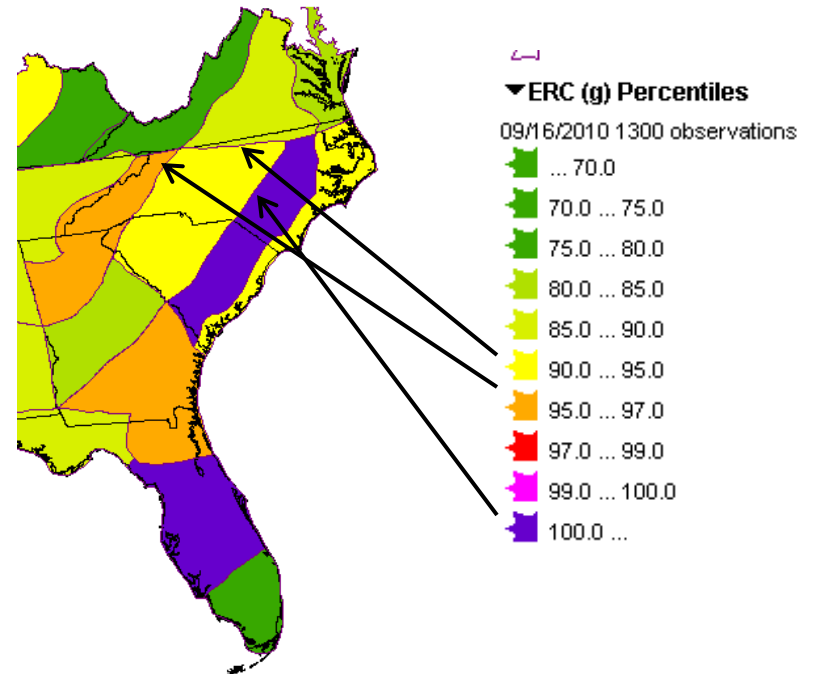
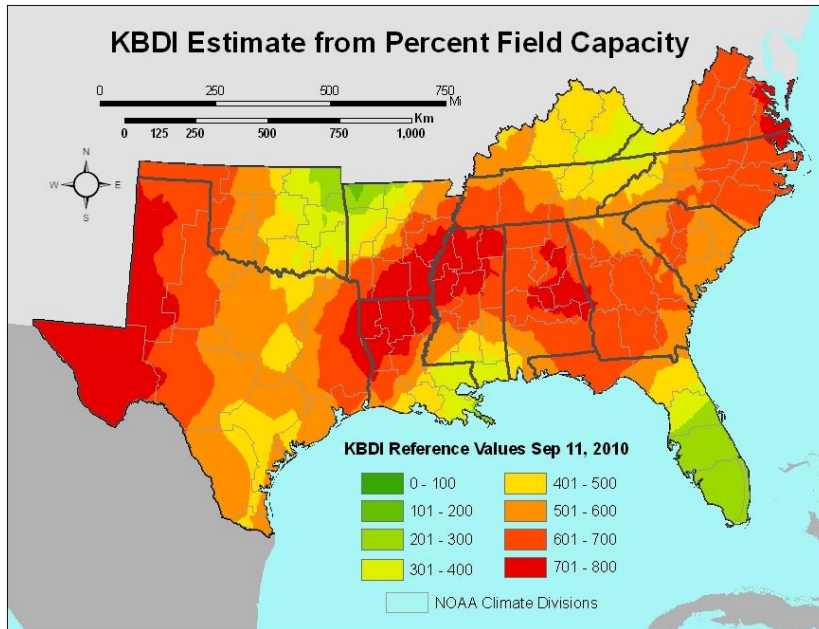


North Carolina: Current 7-Day Percent of Normal Precipitation
Valid at 9/19/2010 1200 UTC- Created 9/20/10 0:07 UTC



Sylva, Asheville, Mt. Holly, Whiteville & New Bern Districts have been severely impacted. In some counties rainfall deficit is as much as 12 to 20+ inches. The vegetation's evapo-transpiration is still accelerated from normal seasonal levels and this exasperates the removal & depletion of valuable ground moisture. Live herbaceous & woody fuel moistures are indicator stressed vegetation with rapid curing potential.

KBDI & ERC, drought indicators, depict the excessive drying in deep duffs, organic soils, and aerial & surface fuels. This “does not” place NC in a very good position going into the Fall fire season



Ground Drying, & Fuel conditions (dead & live) are in percentiles that are at “rare event levels”. In NC east of Interstate 95 to State Highway 17 new records are being set. We are at the 100 percentile. We cannot get any higher than this. Burning conditions are extremely critical and a tropical system will be needed to mediate the severe moisture deficiencies.

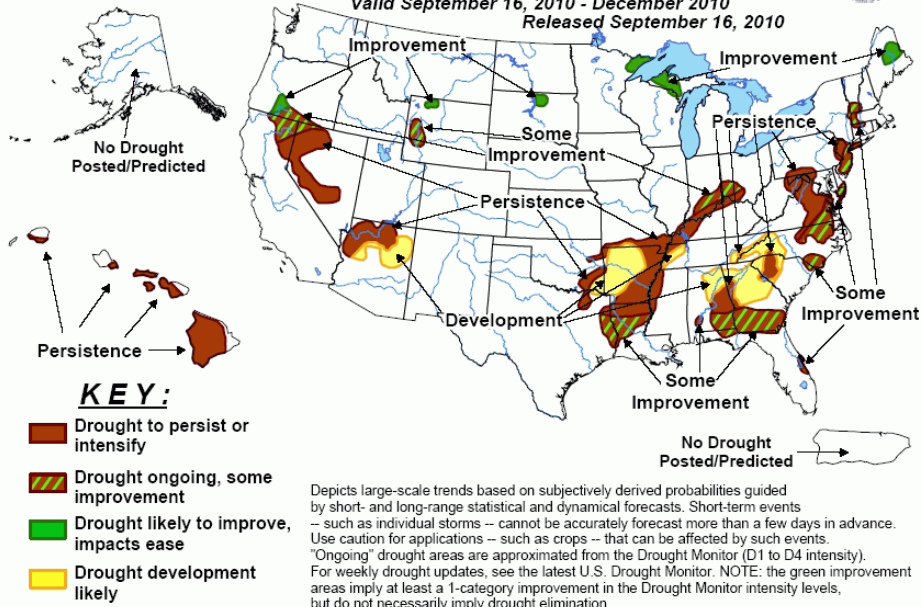


U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid September 16, 2010 - December 2010

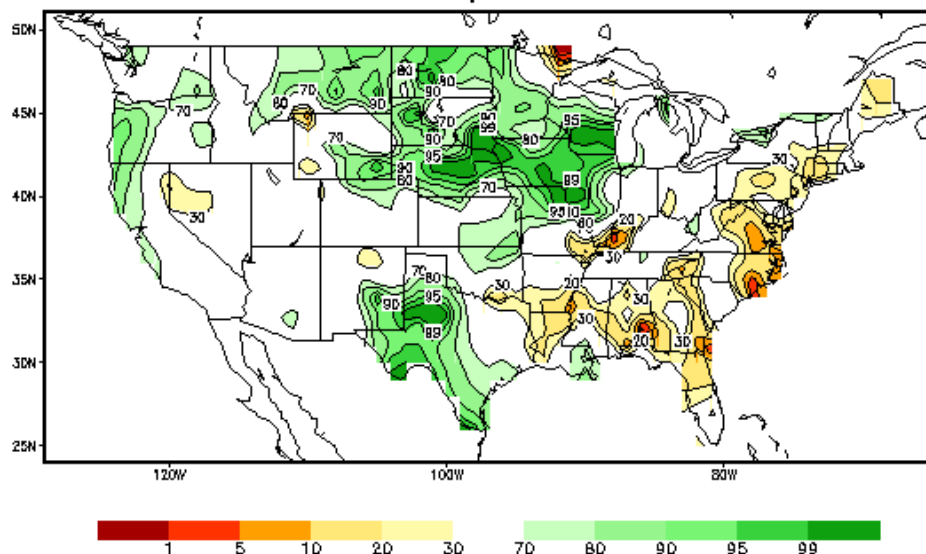
Released September 16, 2010



La Niña conditions have developed and strengthened during the latter part of the summer. The latest CPC ENSO Diagnostic Discussion indicates that La Niña is expected to last at least through the Northern Hemisphere winter months. Therefore, La Niña climate anomalies typically observed can be expected to impact our fuels. Drought conditions have persisted and will continue to develop across North Carolina.

Drier than average conditions are favored across North Carolina. This forecast is complicated with the possibility of tropical cyclone activity. Drought persistence or expansion is forecast in western and southern NC while some improvement is indicated closer to the coasts.

Calculated Soil Moisture Ranking Percentile
AUG, 2010



However, the powder keg & pony keg Districts Whiteville & Mt. Holly respectively along with the Dry Basin Districts Asheville & Sylva are projected to be leaders in extended and intensive mop-up fires. Smoke on the Highways will be a real threat and concern for public safety & health.

Estimated Smoldering Potential has indicated that in 2 weeks time the coastal Organic Muck Soils will be at moisture levels to sustain ignition. The Root Mat soils are already at moisture levels that can sustain fire ignition. The entire organic profile will be consumable.